

Patent Claims:

1. Powder consisting of particles with a core of titanium dioxide and a coating of silicon dioxide,
5 characterised in that
 - it has a content of silicon dioxide between 0.5 and 40 wt.%,
 - it has a BET surface of between 5 and 300 m²/g, and
 - 10 - it consists of primary particles that have a coating of silicon dioxide and a core of titanium dioxide.
2. Powder according to claim 1, characterised in that the
15 primary particles can grow together to form aggregates.
3. Aggregates according to claim 2, characterised in that
20 they consist of primary particles that have grown together via the silicon dioxide coatings.
4. Powder according to claims 1 to 3, characterised in
25 that the content of silicon dioxide in the powder is 1 to 20 wt.%.
5. Powder according to claims 1 to 4, characterised in
that the titanium dioxide core has a ratio of the rutile/anatase modifications of 1:99 to 99:1.
- 30 6. Powder according to claims 1 to 5, characterised in that an aqueous dispersion of the powder with a solids content of 3 wt.% has an absorption of at least 95% at 320 nm and an absorption of at least 90% at 360 nm.
- 35 7. Powder according to claims 1 to 6, characterised in that it has a photoactivity index of less than 0.5.

8. Powder according to claims 1 to 7, characterised in that the isoelectric point is at a pH value between 1 and 4.
- 5 9. Powder according to claims 1 to 8, characterised in that the BET surface is between 40 and 120 m²/g.
- 10 10. Process for the production of the powder according to claims 1 to 9, characterised in that a vaporisable silicon compound and a vaporisable titanium compound are mixed corresponding to the subsequently desired ratio of SiO₂ and TiO₂ in the product, are vaporised at temperatures of 200°C or less and are transferred by means of an inert gas stream together with hydrogen and air or with oxygen-enriched air into the central pipe (core) of a known burner, the reaction mixture is ignited at the mouth of the burner and is introduced together with secondary air, and is combusted in a cooled flame pipe, following which the titanium dioxide powder coated with silicon dioxide is removed from the gaseous reaction products and if necessary is freed in moist air from adhering hydrogen chloride, wherein the ratio of
 - 25 - primary air to secondary air is greater than 0.3,
 - core hydrogen to secondary air is greater than 1,
 - titanium dioxide precursor to secondary air is greater than 0.5
11. Process according to claim 10, characterised in that titanium tetrachloride is used as titanium compound.
- 35 12. Process according to claim 10, characterised in that silicon tetrachloride is used as silicon compound.

13. Sunscreen agent containing the oxide particles according to claims 1 to 9, in an amount of between 0.01 and 25 wt.% referred to the amount of the sunscreen agent.

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14. Use of the powder according to claims 1 to 9 as UV filter, for the production of dispersions and use for chemical-mechanical polishing (CMP process).